

**Abstract**

5 A device for inspecting solder connections between a component and a substrate or  
between two components or substrates, wherein the component is disposed upon the surface  
of the substrate, the device including an image receiving unit. An image transmitting  
device, the image transmitting device including a first end and a second end, the first end  
coupled to the image receiving unit. A tip assembly removably coupled to the second end  
of the image transmitting device, the tip assembly further including a mirror and an image  
receiving aperture, the tip assembly configured to transmit an image of the solder  
10 connections received by the mirror, through the image transmitting device, to the image  
receiving unit, and an illumination device, the illumination device including a light source,  
at least one light transmitting device, and at least one light emitting aperture disposed  
adjacent the image receiving aperture, the light emitting aperture directed towards the  
solder connections to be inspected.